XL. *A Supplement to the Account of an Amphibious Bipes*; *by* John Ellis, *Eſq*; (*Art.* XXII.) *being the Anatomical Deſcription of the ſaid Animal, by Mr.* John Hunter, *F. R. S.*

Read June 5, 1766. THE tongue is broad and has very little motion. It has a bone ſimilar to that in birds, turtles, &c. On the poſterior and lateral parts of the mouth, are three openings on each ſide; theſe are ſimilar to the ſlits of the gills in fiſh, but the partitions do not reſemble gills on their outer edges, for they have not the comb-like ſtructure. Above * and cloſe to the extremity of each of theſe openings externally, ſo many proceſſes ariſe, the anterior the ſmalleſt, the poſterior the largeſt; their anterior and inferior edges, and extremity are ſerrated, or formed into fimbriæ: theſe proceſſes fold down and cover the ſlits externally, and would ſeem to anſwer the purpoſes of the comb-like part of the gill in fiſh.

At the root of the tongue, nearly as far back as theſe openings reach, the trachea begins much in the ſame manner as in birds. It paſſes backwards above the heart, and there divides into two branches, one going

* To avoid the confuſion in our ideas, which might ariſe from the uſe of the words anterior, poſterior, upper, lower, &c. in the whole of this deſcription, the animal is conſidered in its natural horizontal poſition, ſo that the head is forwards, the back upwards, &c.

to each lobe of the lungs. The lungs are two long bags, one on each ſide, which begin juſt behind the heart, and paſs back through the whole length of the abdomen, nearly as far as the *anus*. They are largeſt in the middle, and honey-combed on the internal ſurface through their whole length. The heart conſiſts of one auricle and one ventricle. What anſwers to the inferior vena cava, paſſes forwards above, but in a ſulcus of the liver, and opens into a bag ſimilar to the pericardium; this bag ſurrounds the heart and aorta, as the pericardium does in other animals; from this there is an opening into a vein which lies above, and upon the left of the auricle, which vein ſeems to receive the blood from the lungs, gills, and head, is analogous to the ſuperior vena cava, and opens into the auricle which is upon the left of the ventricle. The aorta goes out, paſſing for a little way in a looſe ſpiral turn, then becomes ſtreight, where it ſeems to be muſcular; at this part the branches go off, between which there is a riſing within the area of the aorta like a bird's tongue, with its tip turned towards the heart*.

* This account of the venæ cavæ opening into the cavity of the pericardium may appear incredible; and it might be ſuppoſed, that, in the natural ſtate of the parts, there is a canal of communication going from one cava to the other, which being broken or nipt through in the act of catching or killing the animal, would give the appearance above deſcribed. I can only ſay, that the appearances were what have been deſcribed, in three different ſubjects which I have diſſected; and in all of them the pericardium was full of coagulated blood. But, beſides the ſmallneſs of the ſubjects, it may be obſerved that they had been long preſerved in ſpirits, which made them more unfit for anatomical enquiries. They had been in my poſſeſſion above ſeven years.

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The liver is principally one lobe, pretty cloſe to the heart at the fore part, and paſſes back on the right of the ſtomach and inteſtines; at its anterior extremity on the left ſide, there is a very ſhort lobe, ending abruptly. The gall-bladder lies in a fiſſure on the left ſide of the liver near its middle; there is no hepatic duct; the hepato-cyſtic ducts, which ſeem to be three in number, enter the gall-bladder at its anterior end or fundus, and the cyſtic duct paſſes out from the poſterior end of the gall-bladder, and terminates in the gut, about half an inch from the pylorus. The œſophagus, which is pretty large, paſſes back, and is continued into the ſtomach in the ſame line. The ſtomach, at the poſterior end, bends a little to the right, where it terminates in the pylorus. The inteſtines paſs back making many turns; at the poſterior end they become pretty ſtreight, forming what may be called the colon, or rectum, where they are a little larger and run to the anus in a ſtreight direction. At the beginning of this larger part of the inteſtinal tube, there is no valvular ſtructure. The ſpleen is a very ſmall but long body; its anterior end is attached to the upper ſurface of the ſtomach, and it is continued back along the left ſide of the meſentery, to which it adheres. The pancreas is a ſmall body lying above the duodenum, and is attached alſo to the left ſide of the meſentery. The kidneys are ſituated in the upper and poſterior part of the abdomen, having the rectum paſſing below and between them as in the ſnake, &c. Below the rectum lies a long bag, like a bladder; it adheres all along to the inſide of the abdominal muſcles, and its mouth opens into the rectum; but whether

ther it is the bladder of urine, or not, I cannot tell. On each ſide of the rectum, cloſe to the lungs, there is a body, the poſterior end of which reſts upon the anterior end of the kidney: whether they are teſticles or ovaria, I cannot pretend to determine; but ſhould imagine that they are either the one or the other.

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